

## ABSTRACT:

The invention relates to a motion-compensated interpolation of a data-signal, which data-signal comprises successive images wherein each image comprises groups of pixels, in which motion vectors are generated (18), each motion vector corresponding to a group of pixels of one image, between a group of pixels of said one image and a second group of pixels of another image in the data-signal, and interpolated results are obtained (16) as a function of these motion vectors. In accordance with the present invention, the reliability of each motion vector corresponding to a particular group of pixels is estimated (20), weights are calculated as a function of the reliability of the motion vectors, and interpolated luminous intensities of groups of pixels are generated for an interpolated image by calculating, on the basis of these weights, weighted averages of the interpolated results.

(Fig. 3)